

WHAT IS CLAIMED IS:

1. A micro mirror unit including a frame and a mirror substrate, formed from a single substrate material, the mirror body having a mirror surface thereof formed on the mirror substrate being linked to the frame by means of hinges in such a manner that the mirror body is supported movably in relation to the frame,  
the hinges of the micro mirror unit being formed from a different material from that from which the frame and mirror body are formed.
2. The apparatus as set forth in Claim 1, wherein the hinges are formed from  $\text{SiN}_x$ .
3. The apparatus as set forth in Claim 2, wherein the hinges are formed from a composite material of  $\text{SiN}_x$  having a metallic material laminated thereon.
4. The apparatus as set forth in Claim 1, wherein the hinges are formed from  $\text{SiO}_2$ .
5. The apparatus as set forth in Claim 4, wherein the hinges are formed from a composite material of  $\text{SiO}_2$  having a metallic material laminated thereon.
6. The apparatus as set forth in Claim 1, wherein the hinges are formed from  $\text{SiC}$ .
7. The apparatus as set forth in Claim 6, wherein the hinges are formed from a composite material of  $\text{SiC}$  having a metallic material laminated thereon.
8. An optical disc drive in which a light is directed from a light source to an optical disc to thereby write and/or read information to and/or from the optical disc,

comprising:

a micro mirror unit to reflect an incident light from the light source towards the optical disc;

the micro mirror unit including a frame and a mirror substrate, formed from a single substrate material;

a mirror body consisting of the mirror substrate and a mirror surface formed on the substrate being linked to the frame by means of hinges formed from a different material from that of the frame and mirror substrate, and thus supported movably in relation to the frame; and

the position of the light incident upon the optical disc being changed by moving the mirror body.

9. The optical disc drive as set forth in Claim 8, wherein the micro mirror unit is provided on a floating slider which is levitated over the optical disc.

10. A method for producing a micro mirror unit comprising a frame and a mirror substrate, formed from a single substrate material, the mirror body having a mirror surface thereof formed on the mirror substrate being linked to the frame by means of hinges in such a manner that the mirror body is supported movably in relation to the frame, comprising:

a first step at which a material for the hinges are formed as layer on one main side of a substrate material for the frame and mirror substrate;

a second step at which a resist layer is formed on the other main side of the

substrate material on which a mirror surface is formed; and

a third step at which the frame and mirror substrate are separated from each other by the dry etching using the resist layer as a mask.

11. The method as set forth in Claim 10, wherein a material different in selection ratio to etching from the substrate material is used as a material for the hinge formed as a layer on the one main side of the substrate material at the first step; and

the material for the hinges are dry-etched as an etching stopper at the third step.

12. The method as set forth in Claim 10, wherein a material for the hinge different in selection ratio to etching from the substrate material is formed as a layer on the one main side of the substrate material at the first step; and

a material different in selection ratio to etching from the substrate material is dry-etched as an etching stopper at the third step.

13. The method as set forth in Claim 10, wherein the plasma CVD process is used to form the material for the hinge as a layer at the first step.

14. The method as set forth in Claim 10, wherein the dry etching is effected by supplying SF<sub>6</sub> gas and CF<sub>4</sub> gas alternately as etching gases at the third step.